

## CLAIMS:

1. A method of operating an imaging device with a two-dimensional field of image sensors as well as an evaluation unit which is capable of reading out and processing the pixel signals, representing output signals of image sensors combined by a binning operation, at a maximum rate of no more than  $G_{max}$ , in which method

- 5    - at least one parameter is preset in order to define a sub-region of the field,  
- any remaining parameters for defining the sub-region as well as the binning factor b and the imaging rate f are defined in such a manner that the maximum rate  $G_{max}$  of the evaluation unit is not exceeded during the reading out of all pixel signals from the sub-region.

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2. A method as claimed in claim 1, characterized in that the image sensors are arranged in a periodic pattern in a rectangular field, the sub-region having a rectangular shape with its sides extending parallel to the edges of the field.

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3. A method as claimed in claim 1, characterized in that the image sensors are X-ray sensors.

4. A method as claimed in claim 1, characterized in that the sub-region is preset in the service mode of the imaging device.

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5. A method as claimed in claim 1, characterized in that there are specified rules in conformity with which variables are changed relative to their current values in order to ensure that the maximum rate  $G_{max}$  is adhered to.

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6. A method as claimed in claim 1, characterized in that the evaluation of the pixel signals is performed by means of calibration images related to the sub-region.

7. A method as claimed in claim 6, characterized in that

- sub-regions are selected which cover the entire field of the image sensors;

- for each of the sub-regions related calibration images are generated with predetermined imaging parameters;
- from the calibration images of the sub-regions there are generated overall calibration images for the imaging parameters which are related to the entire field of image sensors;
- calibration images for an arbitrary new sub-region are acquired from the overall calibration images.

8. A method as claimed in claim 6, characterized in that dark images of the sub-

10 region are generated and used as calibration images.

9. An imaging device which includes a two-dimensional field of image sensors as well as an evaluation unit which is capable of reading out and processing the pixel signals, representing output signals of image sensors combined by a binning operation, at a maximum rate of no more than  $G_{max}$ , the imaging device being arranged

- to enable the presetting of at least one parameter in order to define a sub-region of the field,
- to define any remaining parameters for defining the sub-region as well as the binning factor b and the imaging rate f in such a manner that the maximum rate  $G_{max}$  of the evaluation unit is not exceeded during the reading out of all pixel signals from the sub-region.

10. An imaging device as claimed in claim 9, characterized in that it comprises an

X-ray apparatus with an adjustable diaphragm arrangement in the beam path, at least one

25 adjustment parameter of the diaphragm device being presetable while any remaining adjustment parameters are automatically set.